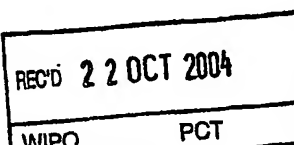


PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TP102327UH	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PE/A416)	
International application No. PCT/FI 03/00586	International filing date (day/month/year) 31.07.2003	Priority date (day/month/year) 31.07.2002
International Patent Classification (IPC) or both national classification and IPC B07B1/42		
Applicant METSO MINERALS (TAMPERE) OY et al.		



1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
 - ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

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3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 86.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 23.02.2004	Date of completion of this report 21.10.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 eprmu d Fax: +49 89 2399 - 4465	Authorized Officer Militzer, E Telephone No. +49 89 2399-2895 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/FI 03/00586**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-17 as published

Claims, Numbers

1-14 as published

Drawings, Sheets

1/7-7/7 as published

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-14
	No: Claims	
Inventive step (IS)	Yes: Claims	1-14
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/FI 03/00586

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document/S/:

D1: US-5 248 042

D2: EP-0 598 293

The document D1 is regarded as being the closest prior art to the subject-matter of claims 1 and 14, and shows a method of controlling a screening machine and a screening machine according to the preambles of claims 1 and 14 respectively.

Document D2 which describes also a method and a machine corresponding to the preamble of claims 1 and 14 respectively.

The subject-matter of claims 1 and 14 differs from this known documents D1 or D2 by the features recited in the respective characterizing clauses.

The subject-matter of claims 1 and 14 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention is to optimize the feeding speed of the feeding means in such a manner that the maximum screening capacity of the screening machine can be obtained and the products produced can be as clean as possible.

The solution to this problem proposed in claims 1 and 14 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

Document D1 describes a screening method and screening machine comprising a pressure sensor which indicates the resistance to turning of the drum and a control system to temporarily diminish the delivery of the material to the drum. The control means can also stop the feeding conveyor temporarily, upon it being sensed in the hydraulic system that there is excess pressure on the drive motor for rotating the drum.

D1 does however not describe the measurement of an upper or lower preset value of the variable dependent on the amount of material on the screen surface and controlling accordingly the speed of the feeding means.

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Document D2 describes a method and machine for screening wherein the screen drive motor is controlled in accordance with the speed of a star feed valve.

D2 does also not describe the measurement of an upper an lower preset value of the variable dependent on the amount of material on the screen surface and controlling accordingly the speed of the feeding means.

Consequently, the subject matter of claims 1 and 14 is considered to involve an inventive step (Article 33(3) PCT) because no document cited in the search report suggests to control the speed of the feeding means depending on the measurement of an upper an lower preset value of a variable dependent on the amount of material on the screen surface.

Claims 2-13 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

The subject matter of claims 1 to 14 is industrially applicable in the field of screening materials (Article 33(4) PCT).

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